



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Applicant(s): Danek et al. Case: 761C4/CPI/L/B/PJS

Serial No.: 10/716,096 Filed: 11/18/2003

Title: CHAMBER FOR CONSTRUCTING A FILM ON A SEMICONDUCTOR WAFER

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Alexandria, VA 22313-1450

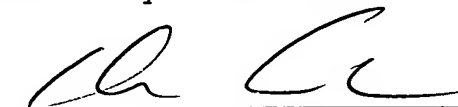
S I R:

Disclosure Statement under 37 CFR 1.56 and 1.98

Pursuant to 37 CFR 1.56, the documents listed on the attached form PTO-1449 are disclosed. Pursuant to 37 CFR 1.98(d), these documents were previously cited by or submitted with a Disclosure Statement in a prior application that is relied upon by the above-identified Continuation application for an earlier filing date under 35 U.S.C. 120. As such, the documents may be found in the file wrapper of U.S. patent application serial number 08/808,246, filed on February 28, 1997, now U.S. Patent 6,699,530 issued March 2, 2004; U.S. Patent Application No. 08/680,913, filed on July 12, 1996; U.S. Patent Application No. 08/677,218, filed on July 9, 1996; U.S. Patent Application No. 08/677,185, filed on July 9, 1996, now U.S. Patent 6,155,198 issued December 5, 2000; U.S. Patent Application No. 08/567,461, filed on December 5, 1995; and U.S. Patent Application No. 08/498,990, filed on July 6, 1995. Inclusion of these documents on any patent issuing from this continuation application is respectfully requested. Under rule 37 C.F.R. 1.98(a), the applicant submits that no specific comments are necessary for any of the cited English language publications.

Respectfully submitted

Mar 30, 2004
Date

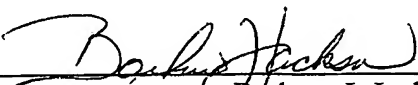
By: 
Keith P. Taboada, Esq.
Reg. No. 45,150

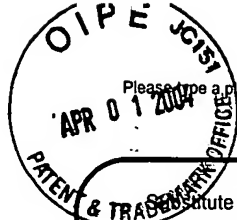
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1

of 5

Application Number	10/716,096
Filing Date	11/18/2003
First Named Inventor	Danek et al.
Group Art Unit	
Examiner Name	
Attorney Docket Number	761C4/CPI/L/B/PJS
Submission Date	

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A1	US-4,173,661	11-1979	Bourdon	
	A2	US-4,420,498	12-13-1983	Hirose et al.	
	A3	US-4,480,010	10-30-1984	Sasanuma et al.	
	A4	US-4,486,462	12-04-1984	Asahi, et al.	
	A5	US-4,619,748	10-28-1986	Moll, et al.	
	A6	US-4,629,635	12-1986	Brors	
	A7	US-4,683,149	7-28-1987	Suzuki, et al.	
	A8	US-4,740,385	04-26-1988	Feuerstein et al.	
	A9	US-4,844,775	07-04-1989	Keeble	
	A10	US-4,871,421	10-03-1989	Ogle et al.	
	A11	US-4,874,494	10-17-1989	Ohmi et al.	
	A12	US-4,931,411	6-5-1990	Tigelaar et al.	
	A13	US-4,965,090	10-23-1990	Gartner, et al.	
	A14	US-4,985,372	1-15-1991	Narita	
	A15	US-5,000,113	03-19-1991	Wang et al.	
	A16	US-5,011,705	04-30-1991	Tanaka	
	A17	US-5,017,403	05-21-1991	Pang et al.	
	A18	US-5,053,245	10-01-1991	Kiyamu et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	B1	EP 0 174 743	03-19-1986	Morton Thiokol Inc.		
	B2	EP 0 376 709	07-04-1990	Inoue et al.		
	B3	EP 0 446 988	9/18/1991	Eniricerche SpA		
	B4	EP 0 477 990	04/1/1998	Applied Materials		
	B5	EP-0 545 602	6-1993	SGS THOMSON MICROELECTRONICS		

Examiner

Date Considered

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Application Number	10/716,096	
			Filing Date	11/18/2003	
			First Named Inventor	Danek et al.	
			Group Art Unit		
			Examiner Name		
			Attorney Docket Number	761C4/CPI/L/B/PJS	
Sheet	2	of	5	Submission Date	

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		Number-Kind Code ² (if known)			
	A19	US-5,057,185	10-1991	Thomas III et al.	
	A20	US-5,089,438	02-18-1992	Katz	
	A21	US-5,175,126	12-29-1992	Ho et al.	
	A22	US-5,246,881	09-21-1993	Sandhu et al.	
	A23	US-5,250,328	10-1993	Otto	
	A24	US-5,254,499	10-19-1993	Sandhu et al.	
	A25	US-5,271,963	12-21-1993	Eichman et al.	
	A26	US-5,273,783	12-28-1993	Wanner	
	A27	US-5,283,085	02-01-1994	Gartner et al.	
	A28	US-5,314,603	05-24-1994	Sugiyama et al.	
	A29	US-5,356,722	10-1994	Nguyen et al.	
	A30	US-5,378,660	02-12-1993	Ngan et al.	
	A31	US-5,420,076	5-1995	Lee	
	A32	US-5,468,687	11-1995	Carl et al.	
	A33	US-5,480,684	01-02-1996	Sandhu	
	A34	US-5,567,483	10-1996	Foster et al.	
	A35	US-5,569,499	10-1996	Maeda et al.	
	A36	US-5,576,071	11-1996	Sandhu	

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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	B6	EP-0 678 903	10-1995	Tel Yamanishi KK		
	B7	EP 0 711 846	5/15/1996	Applied Materials		
	B8	EP-0 720 214	7-1996	Applied Materials		
	B9	EP-0 738 002	10-1996	Texas Instruments		
	B10	JP 59-197131	03-12-1985	Toshiba		

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Date Considered

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
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Sheet 3

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		Number-Kind Code ² (if known)			
	A37	US-5,595,938	11-22-1994	Miyazaki	
	A38	US-5,610,106	03-15-1984	Sasanuma et al.	
	A39	US-5,656,337	8-1997	Park et al.	
	A40	US-5,698,062	12-1997	Sakamoto et al.	
	A41	US-5,712,193	01-1998	Hower et al.	
	A42	US-5,780,115	07-1998	Park et al.	
	A43	US-5,743,839	12-1998	Ng	
	A44	US-5,855,967	01-1999	Kirkpatrick	
	A45	US-5,880,018	03-1999	Boeck et al.	
	A46	US-5,972,179	10-1999	Chittipeddi et al.	
	A47	US-6,004,873	12-1999	Jang et al.	
	A48	US-6,017,818	01-2000	Lu	
	A49	US-6,423,201	07-2002	Mandreckar	
	A50	US-6,500,501	12-2002	Akram	
	A51				
	A52				
	A53				
	A54				
	A55				

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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	B11	JP 63-229814	9/26/1988	NEC		
	B12	JP 02-310918	03-12-1991	Fujitsu		
	B13	JP 03-135018	09-04-1991	Hitachi		
	B14	JP 04-100,221	07-21-1992	Fujitsu		
	B15	JP 05-230,639	12-17-1993	Oki Electric Inc.		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet | 4

of 5

Application Number	10/716,096
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Filing Date	11/18/2003
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First Named Inventor	Danek et al.
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Group Art Unit

Examiner Name

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Submission Date

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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	B16	JP 06-120152	04-1994	Nippon Denso Co.		
	B17	GB-2 299 345	10-1996	Hyundai Electronics		
	B18					
	B19					
	B20					

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				Filing Date	11/18/2003
				First Named Inventor	Danek et al.
				Group Art Unit	
				Examiner Name	
				Attorney Docket Number	761C4/CPI/LB/PJS
Sheet	5	of	5	Submission Date	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	C1	EIZENBERG, "Chemical Vapor Deposition of TiN for ULSI applications:, Mat. Res. Symp Process, 427, 1996, Materials Research Society, p325-335	
	C2	PARK et al., "A Novel A1-Reflow Process Using Surface Modification by the ECR Plasma Treatment and its Application to the 256Mbit DRAM", International Electron Devices Meeting, US, New York, pp 109-112, Dec. 11, 1994	
	C3	RIE, et al., "Deposition of Titanium Nitride Layers by Means of Plasma-CVD," Harterei-Kolloquium 42,, October 5-10, 1986,Wiesbaden	
	C4	SMITH, D., "Thin-Film Deposition Principles and Practice," McGraw-Hill, Inc. Publishers, 1995, pp 423-432, 440-447 and 449-452	
	C5	WANG, et al., "Optimization of PVD Ti/CVD TiN Liner for 0.35 um Tungsten," Plug Technology, Mat. Res. Society Symp. Proc. 427, 1996, Materials Res. Soc. P383-387	

Examiner	Date Considered
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